

Appl. No. 10/789347
Reply to Office action of 10/4/05
Page 2

IN THE SPECIFICATION

Please replace the title starting at page 1, line 2 with the following replacement title:

~~BILLET FOR COLD FORGING, METHOD OF MANUFACTURING BILLET FOR COLD FORGING, METHOD OF CONTINUOUSLY COLD FORGING BILLET, METHOD OF COLD FORGING CRANKSHAFT, METHOD OF COLD FORGING DISK SHAPED PART WITH SHAFT, AND COLD FORGING DIE APPARATUS~~ FORMING DIE APPARATUS

Please replace the paragraph beginning at page 2, line 7 with the following replacement paragraph:

The deformability of the carbon steel S48C is affected by elements including Si, P, S, and Cu. Si is effective to increase the hardness and tensile strength of the steel and speed up the growth of crystal grain upon heat treatment, but tends to reduce stretchability and impact values for thereby impairing the forgeability of the steel. P in the form of a solid solution in ferrite also increases the hardness and tensile strength of the steel, but is liable to reduce impact values, making it easy for the steel to crack and cause cold brittleness. If the carbon steel S48C contains a large amount of S Si, then it precipitates manganese sulfide (MnS) that tends to start cracking when the steel is cold-forged, so that the steel is apt to crack when machined. If the carbon steel S48C contains a large amount of Cu, then the ferrite hardness increases to the extent that impairs the cold forgeability of the steel.

Please replace the paragraph beginning at page 35, line 19 with the following replacement paragraph:

Upon completion of the formation of the pin hole 0 and the removal of the burr b, the upper die 23 22 is lifted. As shown in FIG. 42(b), the scrap removed by the punch 27 returns to its original position in the pin hole p in the counterweight w, and the removed burr b returns to its original position around the counterweight w. These scraps will be discharged when the formed crankshaft or workpiece is ejected.